

Application No.: 10/614,623
Filing Date: July 7, 2003

REMARKS

The June 16, 2008 Office Action was based upon pending Claims 1-8, 10-15, 17-22 and 27-31. This Amendment amends Claims 1, 10, 17, 27, 28, and 30. Thus, after entry of this Amendment, Claims 1-8, 10-15, 17-22 and 27-31 are pending and presented for further consideration.

ISSUES RAISED IN THE OFFICE ACTION

The Office Action rejected Claims 1-8, 10-15, 17-22 and 27-31 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,748,669 to Klayman (hereinafter referred to as "Klayman"), in view of U.S. Patent No. 5,832,438 to Bauer (hereinafter referred to as "Bauer").

Further, the Office Action provisionally rejects Claims 17-31 on the grounds of non-statutory obviousness-type double patenting as being unpatentable over Claim 1 of co-pending Application No. 11/777,127 in view of Bauer.

REJECTION OF CLAIMS 1-8, 10-15, 17-22 AND 27-31 UNDER 35 U.S.C. §103(A)

The Office Action rejected Claims 1-8, 10-15, 17-22 and 27-31 under 35 U.S.C. §103(a) as being unpatentable over Klayman in view of Bauer.

Claim 1

Claim 1 is directed to an audio enhancement system uniquely adapted for use in a near-field audio reproduction system, the audio enhancement system comprising a first high-pass filter which receives first audio information on a first input, the first high-pass filter configured to filter a set of bass components in the first input relative to other frequencies in the first input to create first filtered audio information wherein at least a portion of the bass components are removed from the first audio information.

The system further comprises a second high-pass filter which receives second audio information on a second input, the second high-pass filter configured to filter a set of bass components in the second input relative to other frequencies in the second input to create second filtered audio information wherein at least a portion of the base components are removed from the second audio information.

In addition, the system comprises a difference circuit that receives the first filtered audio information and the second filtered audio information, wherein the difference circuit identifies difference information in the first and second filtered audio information

The system also comprises a summing circuit that combines the processed difference information with at least a portion of the bass components in the first audio information that were removed by the first high-pass filter to create an enhanced first output that comprises at least a portion of the bass components in the first audio information and at least a portion of the processed difference information.

The summing circuit is also configured to combine the processed difference information with at least a portion of the bass components in the second audio information that were removed by the second high-pass filter to create an enhanced second output that comprises at least a portion of the bass components in the second audio information and at least a portion of the processed difference information.

The Cited References

As discussed in the interview, none of the cited references remove bass components from the audio information on the first and second inputs, uniquely spectrally shape the difference information without the bass components, and then combine the spectrally shaped difference information with at least a portion of the bass components that were removed from the first and second inputs. As a result the output as at least a portion of the bass components that were removed from the first and second inputs.

Applicant therefore respectfully submits that Claim 1 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 1.

Claims 2-8

Claims 2-8 depend from Claim 1 and are believed to be patentable for the same reasons articulated above with respect to Claim 1, and because of the additional features recited therein.

Claim 10

Claim 10 is directed to an apparatus for enhancing sound, the apparatus comprising a first high-pass filter which receives first audio information on a first input, the first high-pass filter configured to filter bass components from the first audio information to create first filtered information wherein at least a portion of bass components have been filtered from the first audio information.

The apparatus further comprises a second high-pass filter which receives second audio information on a second input, the second high-pass filter configured to filter bass components from the second audio information to create second filtered audio information wherein at least a portion of the bass components have been filtered from the second audio information.

The apparatus also comprises a difference circuit in communication with the first and second high-pass filters, the difference circuit configured to identify the difference information in the first and second filtered audio information;

In addition, the apparatus comprises a summing circuit in communication with the equalizer and the first input and the second input, the summing circuit configured to combine the spectrally shaped difference information with a portion of the bass components that were filtered from the first audio information on the first input to generate a first output comprising at least a portion of the bass components in the first audio information and at least a portion of the spectrally shaped difference information.

The summing circuit is further configured to combine the spectrally shaped difference information with the bass components that were filtered from the second audio information on the second input to generate a second output comprising at least a portion of the bass components in the second audio information and at least a portion of the spectrally shaped difference information.

The cited references, however, do not teach the use of first and second high-pass filters which filter bass components from the first and second audio information, wherein a portion of these bass components are then combined with spectrally shaped

difference information such that the output has at least a portion of the bass components..

Therefore, Applicant respectfully submits that Claim 10 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 10.

Claims 11-15

Claims 11-15 depend from Claim 11 and are believed to be patentable for the same reasons articulated above with respect to Claim 11, and because of the additional features recited therein.

Claim 17

Claim 17 is directed an apparatus for enhancing sound, the apparatus comprising a first input and a second input wherein the first and second inputs comprise first and second audio information with bass components and other frequencies.

The apparatus further comprises a difference circuit configured to identify difference information in the first and second inputs, wherein at least a portion of the bass components in the first and second inputs are removed from the difference information.

In addition, the apparatus comprises an equalizer configured to spectrally shape the difference information in the first and second inputs.

The method also comprises a summing circuit configured to combine the spectrally shaped difference information with at least a portion of the bass components removed from the difference information, to generate a first output comprising at least a portion of the bass components and the spectrally shaped difference information.

Furthermore, the summing circuit is configured to combine the spectrally shaped difference information with at least a portion of the bass components removed from the difference information to generate a second output comprising at least a portion of the bass components and the spectrally shaped difference information.

The cited references, in contrast, do not describe combining at least a portion of the bass components in the first and second inputs with the spectrally shaped difference information.

Accordingly, Applicant respectfully submits that Claim 17 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 17.

Claims 18-22

Claims 18-22 depend from Claim 17 and are believed to be patentable for the same reasons articulated above with respect to Claim 17, and because of the additional features recited therein.

Claim 27

Claim 27 is directed to a method for enhancing sound, the method comprising receiving at least a first input and a second input, wherein the first and second inputs comprise at least a first set of bass components and a second set of other frequencies.

The method further comprising spectrally shaping difference information in the first and second inputs wherein at least a portion of the bass components have been filtered, wherein spectrally shaping the difference information boosts the amplitudes of the second set of frequencies.

The method also comprises combining the spectrally shaped difference information with at least a portion of the bass components in the first input to generate a first output that comprises at least a portion of the bass components in the first input and the spectrally shaped difference information.

None of the cited reference in contrast, teach combining bass components in the first input with spectrally shaped difference information to generate an output that comprises at least a portion of the bass components in the first input and the spectrally shaped difference information.

In light of these differences as well as other differences, Applicant respectfully submits that Claim 27 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 27.

Claim 28

Claim 28 is directed to a method for enhancing sound, the method comprising receiving at least a first input and a second input, wherein the first and second inputs comprise at least a first set of bass components a second set of other frequencies.

The method further comprising spectrally shaping difference information in the first and second inputs, wherein spectrally shaping the difference information boosts the amplitudes of the second set of frequencies.

The method also comprising combining the spectrally shaped difference information with at least a portion of the fist set of bass components in the first input to generate an output that contains the spectrally shaped difference information and the portion of the bass components in the first input.

In light of the differences between Claim 28 and the cited references, Applicant respectfully submits that Claim 28 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 28.

Claim 29

Claim 29 depends from Claim 28 and is believed to be patentable for the same reasons articulated above with respect to Claim 28, and because of the additional features recited therein.

Claim 30

Claim 30 is directed to a method for enhancing sound, the method comprising receiving at least a first input and a second input, wherein the first and second inputs comprise a first set of bass components and a second set of frequencies that occur at other frequencies.

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The method further comprising spectrally shaping difference information in the first and second inputs, wherein spectrally shaping the difference information modifies the amplitudes of the second set of frequencies.

In addition, the method comprising combining the spectrally shaped difference information with at least a portion of the bass components in the first input to generate an output that comprises the portion of the bass components in the first input and the spectrally shaped difference information.

In light of the differences between Claim 30 and the cited references, Applicant respectfully submits that Claim 28 is patentably distinguished over the cited references and Applicant respectfully requests allowance of Claim 30.

Claim 31

Claim 31 depends from Claim 29 and is believed to be patentable for the same reasons articulated above with respect to Claim 29, and because of the additional features recited therein.

REJECTION OF CLAIMS 17-31 ON THE GROUNDS OF DOUBLE PATENTING

The Office Action provisionally rejects Claims 17-31 on the grounds of non-statutory obviousness-type double patenting as being unpatentable over Claim 1 of co-pending Application No. 11/777,127 in view of Bauer.

Applicant is abandoning Application No. 11/777,127 to focus on the current application. Thus, this rejection is now moot.

NO DISCLAIMERS OR DISAVOWALS

Although the present communication may include alterations to the application or claims, or characterizations of claim scope or referenced art, Applicant is not conceding in this application that previously pending claims are not patentable over the cited references. Rather, any alterations or characterizations are being made to facilitate expeditious prosecution of this application.

Applicant reserves the right to pursue at a later date any previously pending or other broader or narrower claims that capture any subject matter supported by the

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present disclosure, including subject matter found to be specifically disclaimed herein or by any prior prosecution.

Accordingly, reviewers of this or any parent, child or related prosecution history shall not reasonably infer that Applicant has made any disclaimers or disavowals of any subject matter supported by the present application.

CONCLUSION

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. In light of the above remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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